License Number: HW-1
Expiration Date: 2/20/81
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ENVIRONMENTALLY HAZARDOUS WASTE DISPOSAL SITE LICENSE

Department of Environmental Quality
1234 S.W. Morrison Street
Portland, Oregon 97205
Telephone: (503) 229-5913

Issued in Accordance with the Provisions of

ORS CHAPTER 459

ISSUED TO:

(Licensee)
Chem-Nuclear System, Inc.
P.O. Box 1866
13401 Bellevue-Redmond Road
Bellevue, Washington 98009

LOCATION:
S 1/2 of NE 1/4 of Section 25 and
N 1/2 of NE 1/4 of Section 36, T2N, R20E, W.M.

ISSUED BY THE ENVIRONMENTAL QUALITY COMMISSION

LOREN KRAMER
Director, Department of Environmental Quality

MAR 2 1976
Effective Date

REFERENCE INFORMATION

Facility Name: Oregon Pollution Control Center and Hazardous Waste Repository

County: Gilliam

Operator: Chem-Nuclear Systems, Inc.
P.O. Box 1866
Bellevue, Washington 98009

Until such time as this license expires or is modified or revoked, Chem-Nuclear Systems, Inc. is herewith authorized to establish, operate and maintain a site for the disposal and handling of environmentally hazardous wastes as defined by ORS 459.410 and rules of the Department of Environmental Quality, except any radioactive material. Such activities must be carried out in conformance with the requirements, limitations, and conditions which foll. This license is personal to the licensee and non-transferable.

ATTACHMENT D

ATTACHMENT F

State of Oregon

DEPARTMENT OF ENVIRONMENTAL QUALITY

OCT 21 REC'D

INTEROFFICE MEMO

To: File HW 4.00

Date: October 19, 1977

From: Fred Bromfeld FB

Subject: COSCITE Report on the Disposal of 2,4,5,T at Arlington

By letter to Bill Young, October 4, 1977, COSCITE approved the disposal of 2,4,5,T at Arlington. That approval, however, was qualified by Vern Newton, Department of Geology and Mineral Industries, as follows: "That the permit to store additional chemical wastes at the Arlington site be conditioned upon the estimated storage capacity at the site; and upon tests to show that soil chemistry will provide a barrier against off-site drainage." We feel this statement needs further comment.

BACKGROUND

1. In June 1972, Chem-Nuclear submitted an application to the Department to dispose of both chemical and low-level radioactive wastes at the Arlington site. A geological evaluation by Shannon & Wilson of the site was included as part of the application.

   Ray Corcoran, the State Geologist, reviewed the evaluation and in a September 8, 1972, letter to the Department stated "... the site would appear to be geologically sound for storage of low-level radioactive wastes." Curiously, the subject of chemical wastes was not specifically addressed, but the following two geological report reviews were attached to Ray's letter:

   a. A March 4, 1971, letter from Ray to the State Board of Health stating:

      > Bedrock beneath the site is fine-grained, clayey siltstone, the most desirable material for retaining any seepage of water or leachate which might possibly escape from the burial pits. Porosity, permeability, and ion exchange tests corroborate the field and petrographic data. The arid climate, petrology and chemistry of the bedrock and geologic setting are all favorable for the proposed use.

   b. An October 14, 1971, letter from Vern Newton, also to the State Board of Health, concludes:

      > Both the State Engineer's office and consultant Ruben Newcomb are satisfied that no contamination of the basalt aquifer or spring will occur from operations at the Chem-Nuclear site. Mr. Newcomb

> is an authority on ground water conditions in eastern Oregon and Washington. Therefore from our review of the Shannon & Wilson study and from statements by Messrs. Newcomb and Bartholomew, we are satisfied that escape of radio-active materials from the site is very unlikely.

2. A March 12, 1976, analysis by consultant geologist Robert Bergstrom concluded:

> The tuffs beneath the Chem-Nuclear trenches will act as an absorbing soil column some 150 feet thick, to trap any fluids that leak from the trench.
>
> If it is assumed that a 4.5 foot (column) of water per year is free to infiltrate ... and if the tuffs are assumed to have a specific retention of 15 percent, the water could penetrate downward only 30 feet before being depleted by the specific retention of the tuffs. This water will migrate primarily downward, and not laterally, inasmuch as gravity is the dominant force causing movement in the unsaturated zone.
>
> The limited downward movement of water from the trenches can produce no degradation of the ground-water reservoir because the reservoir (at a depth below 500 feet) is protected by relatively impermeable confining basalt and a strong upward artesian pressure.

In reality, the amount of drummed liquids proposed to be brought to Arlington is only a tiny fraction of the amount necessary to produce a 4.5 foot depth of liquid.

3. We have monitoring wells 7 feet beneath Trench 5 where the drummed liquids are placed. Waste handling procedures would be modified should any leakage become apparent.

CONCLUSION

Based on the references above, we feel that the site is adequate to contain the relatively small quantities of materials that are buried as liquids. These consist mainly of pesticides and other substances that are not amenable to solidification under current industrial practices. It is our aim to keep this burial to a minimum and to require solidification whenever practical.

FSB/kz
cc Mr. Bill Young
Dr. Warren Westgarth
Mr. Mike Wehr, Chairman, COSCITE
Mr. Patrick Wicks, Chem-Nuclear ✓
w/attachment

ATTACHMENT G

VOLUME OF MATERIAL

Expected volume of material is difficult to estimate. Anticipated volumes are projected at 10 to 40 tons per year.

DISPOSAL METHOD

Chem-Nuclear Systems, Inc. proposes to dispose of PCB wastes in accordance with the following procedure:

a. Waste will be buried in the containers in which they are received or stored. An area of sufficient size will be selected in the northwest or northeast corner of trench No. 5.

b. The selected area will be covered with powdered charcoal not less than one foot in depth with charcoal piled in greater depth around the edges of the area. Charcoal would then be covered with one foot of earth.

c. Capacitors, drums and other containers of waste would be stacked in this area to height no more than 7 feet or two 55 gallon drums. After the containers have been placed in the area a reventment of 3/4 inch plywood with suitable supporting posts would be placed around the unenclosed sides of the area at such distance from the containers to allow at least 6 inches of earth to separate the wood from the containers.

d. The area would then be filled in and covered with earth.

Approval is also requested to allow Chem-Nuclear Systems, Inc. to temporarily store containerized PCB wastes in the fenced storage area at the Arlington site for intervals of no more than six months.

VERBAL APPROVAL

For each new source of PCB waste, Chem-Nuclear Systems, Inc. will verbally request the DEQ to approval disposal at the Arlington site. At the time of each such request the following information will be provided:

1. Waste quantity
2. Source of the waste

Approval or denial of such request will be given verbally either immediately or within no more than two days.

APPROVED:

OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY

Feb. 18 1976

Date